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FOREIGN ANIMAL  
DISEASES REPORT



APRIL-MAY 1977



EXOTIC NEWCASTLE DISEASE

On February 17, 1977, an outbreak of exotic Newcastle disease was discovered in a wholesale pet bird aviary at Charlotte Court House, Virginia. Epidemiological evidence indicated that the infection entered this aviary on February 2, 1977. Between the date that the infection was determined to have entered the facility and the date the premises were placed under quarantine, shipments of birds had been made to 41 locations in 19 States. On February 18, 1977, the Northern Regional Emergency Animal Disease Eradication Organization (READEO) was activated and the infected flock, as well as one exposed flock in the area, were appraised, depopulated, and the premises cleaned and disinfected. In addition, active surveillance was

conducted at 2-week intervals within an 8-mile radius surrounding the infected premises. The pet birds which originated from the infected premises, as well as contact birds, were appraised and destroyed, or in those cases where birds were in private homes, they were kept under surveillance and laboratory diagnostic procedures were conducted.

On February 19, 1977, the Western READEO was activated and established at San Diego, California, on the basis of clinical symptoms and lesions in birds submitted to the State of California Laboratory, San Gabriel, California, from a private collection of fancy birds at Alpine, California. On February 22, 1977, exotic Newcastle disease was confirmed in this flock.

Epidemiological and diagnostic procedures revealed three additional cases of exotic Newcastle disease in the immediate area in San Diego County, California, and one case in a wholesale pet bird aviary at Colton, San Bernardino County, California.

As of April 6, 1977, approximately 12,170 birds appraised at approximately \$700,000 had been destroyed to eliminate the outbreak. Since the infection involved pet birds, several meetings were held with representatives of the pet bird industry.

The outbreak was eliminated with no spread to commercial poultry. Extensive surveillance has been conducted in the area of southern California with no subsequent cases being disclosed. Increased surveillance will be conducted in the area for at least 4 months after the task force is deactivated.

## FOREIGN ANIMAL DISEASE AWARENESS SEMINARS

Emergency Programs officials held Foreign Animal Disease Awareness Seminars at Harrisonburg, Virginia, on October 6, 1976, Harrisburg, Pennsylvania, on December 16, 1976, and Cornell University, Ithaca, New York, on April 5, 1977.

The people attending these seminars included practicing veterinarians, veterinary students and faculty members, as well as representatives of the livestock and poultry industries, State and Federal agencies, and other interested people.

The world animal disease situation was reviewed, and its threat to the vulnerable livestock population of the United States.

Cooperation between State-Federal officials and industry in planning, preparation, training, and combating foreign animal diseases was the theme throughout these meetings.

## FLEMING KEY ANIMAL IMPORT CENTER

The United States Department of Agriculture (USDA) has developed criteria for the location, design, construction, and operation of an overseas livestock quarantine facility that would screen cattle prior to shipment to the USDA's proposed animal import center at Fleming Key, Florida.

The overseas port of embarkation quarantine facility, together with the Fleming Key Animal Import Center, is part of a new high security livestock import system. Valuable breeding stock will be permitted to be imported safely from selected foot-and-mouth disease or rinderpest infected countries by using careful screening, long-term isolation, and stringent veterinary testing and examination.

The purpose of the import center is to permit exotic breeds of cattle, to be utilized in livestock improvement programs, which would bring about numerous economic benefits to the livestock industry and the consumer. These anticipated benefits are expected to accomplish, for the livestock industry, what the plant exploration and introduction programs have accomplished for the plant industry.

Utilization of exotic strains of livestock is expected to increase production capabilities, rate of gain, food conversion capabilities, livability, and reduce waste fat.

The animal quarantine building at Fleming Key will have 75 pens, 15 by 20 feet each, holding five animals (four imports and one U.S. contact), plus additional pens for bulls. Every two rows of pens will be separated by a "dirty" corridor for service of animals and removal of manure.

The quarantine center will operate on an all-in, all-out basis. In addition, the USDA will impose rigid prequarantine requirements on import animals. These will include age limitations, a review of the animal disease situation in the country of origin, the health status of source herds, an initial isolation and test period on the premises of origin, a minimum 30-day quarantine in USDA approved overseas embarkation quarantine stations, satisfactory test results on



required diagnostic procedures (foot-and-mouth disease virus isolation and serology, tuberculosis, brucellosis, leptospirosis, and other tests as required), and a USDA import permit.

The cattle will be transported by ship to Key West, Florida, where they will be offloaded and transported to Fleming Key in self-contained trucks. The cattle will enter the center and be identified and inspected. A precautionary dipping for ectoparasites will be conducted.

Testing procedures for various diseases will be conducted during the quarantine. The Plum Island Animal Disease Center (PIADC) of the Agricultural Research Service will perform tests for foot-and-mouth disease, as well as be involved in solving other specific diagnostic problems which may arise while the animals are in quarantine. Many of these tests require work with highly infectious disease organisms, and legislation stipulates that such work in the United States may be done only in the PIADC facilities.

Tests to assure freedom from foot-and-mouth disease will, on occasion, be conducted in laboratories in the country of origin. However, there will still remain large numbers of laboratory tests to be conducted with each shipment of 400 animals. It is estimated that the number of tests on the 800 imported animals, and the 200 contacts of U.S. origin, could necessitate the examination of 2,000 serological samples per year.

All maintenance, operation, feed, bedding, and salaries, except the USDA veterinarians' salaries, will be reimbursed to the USDA by the importers. It is estimated that the cost to the importer per animal will be about \$2,500.

Upon completion of the 5-month quarantine, the cattle will be released to their destination without further restrictions.

The construction contract for the center was awarded on January 11, 1977, and construction started on February 1, 1977. Completion date is estimated on or about October 1978.

#### PSEUDORABIES CONFERENCE

A fact finding conference was held on Pseudorabies at Iowa State University, Ames, Iowa, April 4-5, 1977.

Papers were presented on the research, history, and current status of the disease in Europe and North America.

Pros, cons, and criteria for an eradication program were discussed. The meeting is summarized as follows:

All segments want to control the disease with the ultimate goal being eradication; there is need for additional research, but actions to control the disease cannot wait for all questions to be answered; a need for a standard method of testing for the disease, nationwide, must be developed, recognizing that improved tests may be developed; the need to start now to control movements of diseased animals

to protect free herds and areas; there is not presently an approved vaccine in the United States, but one is under development. It may be that the use of this vaccine under strict control could be a part of a program.

Dr. F. J. Mulhern, Administrator of APHIS pointed out the need for technical information to conduct an eradication program, and the cooperation, support, and commitment of the industry.

#### TRANSPORTING NON-INFECTED ANIMALS FROM A QUARANTINED AREA

The Emergency Programs Work Group on Animal Protein Conservation is considering the possibility of moving non-infected animals from a quarantined area to slaughter and special processing.

A vehicle modified to permit safe transportation was recently designed by Mr. Paul James, Agricultural Engineer, Agricultural Research Service, Beltsville, Maryland. The following was extracted from his presentation to the American Society of Agricultural Engineers in Chicago, Illinois, on December 13, 1976.

There are three demands which must be satisfied by the truck modification: the body of the truck must be made leak proof so it will contain all liquid and solid wastes from the animals; the air leaving the trailers must be filtered to remove possible airborne disease pathogens; adequate ventilation must be provided to supply the animals' respiratory requirements, remove ammonia, carbon dioxide, water vapor, and heat produced by the animals. The minimum ventilation rate recommended for shipment of livestock by air is 1.4 cubic m (50 cubic feet) per minute for each 453.6 kg (1,000 lbs.) body weight of dry mature dairy cows or pregnant heifers. The trailer modifications are shown in Figure 1.

The body was leak-proofed by laying heavy duty, .1524 mm (.006 in.) thick, polyethylene on the floor and 1.52 m (5 feet) up the walls. A double thickness of plastic was used on the walls to provide a smooth surface where the animals rub. This is to avoid tearing of the plastic. The plastic is overlapped and mastic applied between the overlap. Asphalt impregnated sheathing, 25 mm (1 inch) thick, was placed over the plastic on the floor to provide the animals good footing and prevent penetration of the plastic by the animals' hoofs. An additional scuff panel was extended .5m (16 inches) up the walls from the floor. This was made of 12.6 mm (1/2-inch) plywood. Sawdust was placed on the floor to absorb waste materials.

The filter removes 80 percent of the .3 microns (.000012 in.) particles with the air velocity used. Since this high performance filter would clog rapidly with dust and hair if used by itself, a prefilter is placed in the air stream ahead of it. The prefilter is also protected by a screen in front of it. This screen can be easily cleaned. The filters are assembled in a box attached to the inlet of the fan.

An exhaust fan is used in order to draw air into the trailer through any crevices around the doors or openings in the body; otherwise, unfiltered air would be escaping from the trailer through these crevices. The exhauster has a single

inlet facing toward the interior of the trailer. This exhauster has a 0.46 m (18-1/2 inch) diameter fan. At 660 rpm, it exhausted 128 cubic m (4,530 cfm) of air per minute with 15.8 mm (5/8-inch) suction pressure. The unit may be serviced in the truck in this location, and is placed on rails so it could be removed in an emergency. The air leaving the ventilating fan is directed above the engine exhaust to carry away the engine exhaust fumes.

Fresh air is introduced through a 1.52 mm (.005 inch) polyethylene duct .6 m (20-inch) diameter. In order to equalize the air circulation along the trailer, .15 m (6-inch) diameter holes were cut in the duct every 1.2 m (4 feet).

The fan-drive system is a 3kW (4 hp) gasoline engine which provides adequate reserve power. This is used while the truck is in motion. A 1.5kW (2 hp) electric motor is used as a standby unit. It is used whenever the truck is standing still and there is a source of electricity available. Dual sheave pulleys and matching belts are used between the engine and exhauster. If one belt breaks, the other will carry the load until a replacement belt is installed.

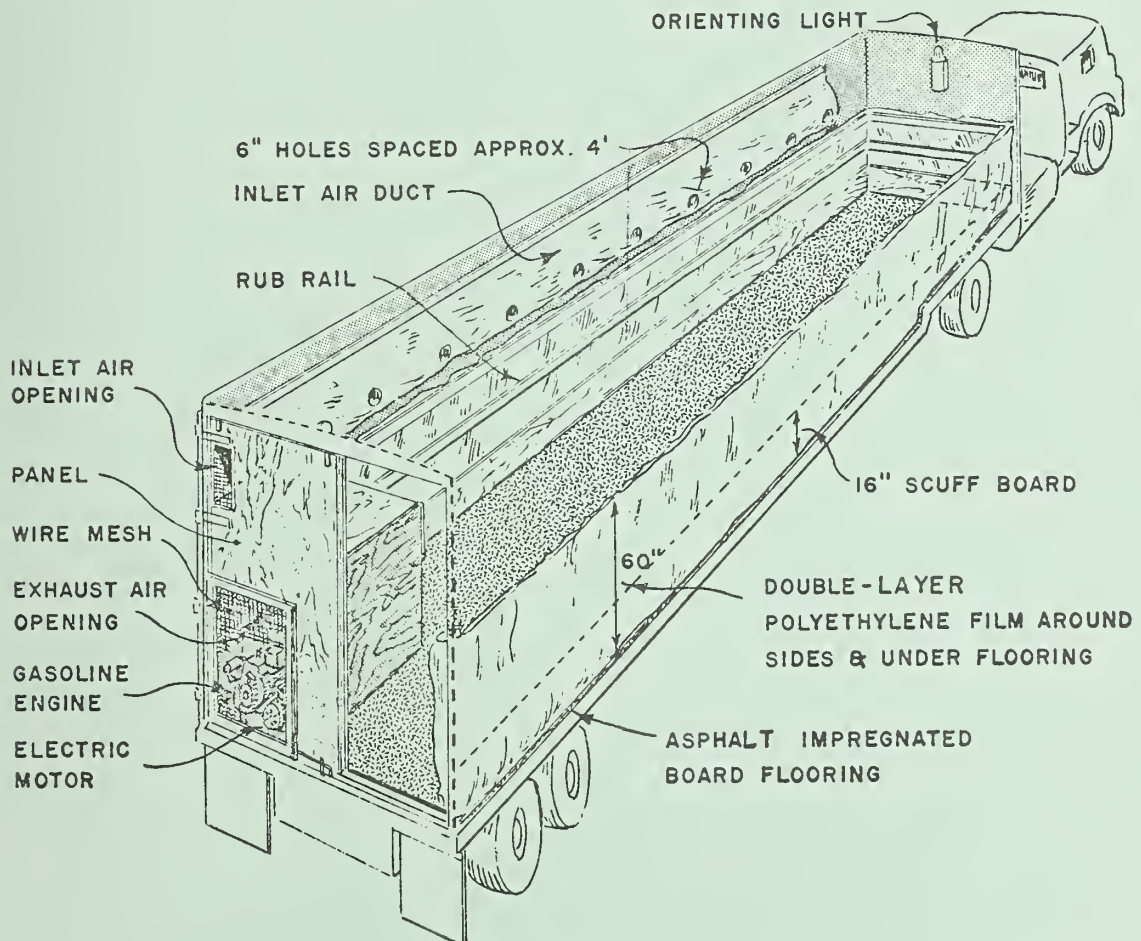


Figure 1. -- Modification of trailer.



## GUATEMALA SIGNS AGREEMENT

Guatemala recently signed an agreement with the United States Department of Agriculture (USDA) to cooperate in animal disease prevention and control. This completes the signing of similar agreements with all the Governments of Central America and Panama.

These agreements are in accordance with P.L. 92-152 which authorizes the Secretary of Agriculture of the United States to cooperate with the Governments of Mexico, Guatemala, El Salvador, Belize, Panama, Colombia, Canada, the Bahama Islands, and the Greater and Lesser Antilles, in the prevention, control, and eradication of foot-and-mouth disease (FMD), rinderpest, and other communicable diseases of animals which pose a threat to the livestock industry of the United States.

Presently, we have veterinary advisors in El Salvador, Costa Rica, and Nicaragua assisting these and other Central American countries in carrying out the responsibilities as set forth in the cooperative agreements.

USDA's Veterinary Services also has personnel assigned to joint commissions in Panama and Mexico for the prevention of FMD, rinderpest, and other diseases which pose a threat to the livestock industry of the United States. Personnel are also assigned to Colombia for a cooperative program to prevent the northward movement of FMD due to the construction and completion of the Darien Gap portion of the Pan American highway.

## MILITARY TRAINING PROGRAM

A 1-week training course entitled Military Support to Emergency Animal Disease Programs was conducted by Emergency Programs (EP), Veterinary Services (VS), Animal and Plant Health Inspection Service of the U.S. Department of Agriculture (USDA), during the period April 18-22, 1977. The course, specifically designed for military veterinarians, was developed and administered by the Military Liaison Officer for EP, and the Chief Staff Veterinarian for Professional Development for VS. Ten military veterinarians attended the training program.

Objectives of the course were established to provide each attendee with the ability to: 1) Construct the administrative methodology for utilizing military support for USDA livestock and poultry disease eradication programs; 2) Outline the actual procedures involved in combating a livestock and/or poultry disease outbreak under emergency conditions; 3) Recognize the usefulness of epidemiology as a tool in livestock and poultry disease control, eradication, and prevention; 4) Identify, differentiate, and geographically locate those diseases of livestock and poultry of greatest economic and public health significance to EP; and 5) Research the literature available on livestock and poultry diseases exotic to the United States and develop this information for entry into a data bank system.



WORLD DISEASE REPORTS\*

Country	Date 1976	New Outbreaks	Country	Date 1976	New Outbreaks
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Foot-and-Mouth Disease

Argentina	August 16 - Jan. 31, 1977	182	Israel (control territory)	November	1**
Brazil	September 18 - Jan. 14, 1977	2,912	Ivory Coast	July-November	5
Burundi	July-September November	10 1	Kenya	October - January 1977	16
Cameroon	November	3	Kuwait	December - February 1977	428**
Chad	October	1	Malawi	Aug.-Sept.	2
Chile	Oct.-Dec.	10	Niger	Sept.-Oct.	39
Colombia	October - Jan. 15, 1977	97	Paraguay	Oct. 16-Dec. 10 Jan. 22-Feb. 18, 1977	5 5
Ecuador	October Nov.-Dec.	4** 8	Spain	Sept.-Dec.	19
Egypt	January 1977	2	Syria	Sept.-Dec.	15
Holland	Jan. 1-15, 1977	1	Tanzania	July-October	15
Hong Kong	October - January 1977	74	Thailand	Aug.-Oct.	34**
India	May-August	972	Turkey	October - January 1977	190
Iran	Oct.-Dec.	7	Uruguay	Sept.-Dec.	60
Iraq	November - January 1977	5	U.S.S.R.	Sept.-Dec.	55

Sheep Pox

India	May-August	89	Kuwait	October - February 1977	970**
Iran	October - January 1977	52	Morocco	Sept.-Dec.	70
Iraq	November - January 1977	582**	Syria	September Nov.-Dec.	105** 232**
Israel	November - January 1977	9	Tunisia	October - January 1977	9
Israel (control territory)	November - January 1977	18	Turkey	Sept. 16-Dec.	382
			U.S.S.R.	Nov.-Dec.	5

Contagious Bovine Pleuropneumonia

Chad	Aug.-Nov.	10	Ivory Coast	May-November	23
Ghana	July-August Oct.-Dec.	5 18	Niger	Sept.-Nov.	5
India	May	1			

Lumpy Skin Disease

South Africa	October - January 1977	56	Swaziland	Nov.-Dec.	5
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Country	Date 1976	New Outbreaks	Country	Date 1976	New Outbreaks
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#### Rinderpest

India	May-August	40	Kuwait	December	1**
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#### African Swine Fever

Spain	October 16 - Feb. 15, 1977	290	Portugal	October - January 1977	715
Malawi	Aug.-Nov.	7			

#### Swine Vesicular Disease

Italy	February 1977	2	United Kingdom	December 16 - Feb. 28, 1977	15
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#### African Horse Sickness

South Africa reported one outbreak in December 1976.

#### Dourine

South Africa reported three outbreaks from October 1976, to January 1977.

( \*Extracted from International Office of Epizootics, Monthly Circular, numbers 360, 361, 362, and 363).  
(\*\*Cases).

#### ADVISORY COMMITTEE ON POULTRY HEALTH MEET

The Fowl Plague Subcommittee of the Advisory Committee on Poultry Health to the Secretary of Agriculture met on February 1 and 2, 1977, in Madison, Wisconsin.

The purpose of the meeting was to formulate recommendations as to how the Department should deal with outbreaks of avian influenza which are lethal to chickens and turkeys.

The parent committee will meet in Hyattsville, Maryland, on May 12 and 13, 1977. At that time, the recommendations formulated by the subcommittee will be presented to the main body committee for their acceptance. Whereupon, the recommendations will then be finally materialized and presented to the Secretary to assist Veterinary Services in carrying out poultry disease programs.